

**Listing of Claims:**

1. (currently amended) A sensor for providing a position-related signal for a piston first element in relation to a cylinder second element, the sensor comprising:

a flexible connector having a first end attachable to the piston first element;

a rotating element attachable to the cylinder second element and coupled to a second end of the flexible connector;

a translating member cooperating with the rotating element to move along a linear path; and

a transducer disposed to sense a linear position of the translating member, wherein the transducer provides the position-related signal.

2. (cancelled)

3. (cancelled)

4. (original) The sensor of claim 1 wherein the transducer is one selected from the group comprising a LVDT, a DVRT, a potentiometer, an inductive transducer, a capacitive transducer, and a Hall-effect transducer.

5. (previously cancelled)

6. (cancelled)

7. (original) A cylinder comprising a piston and a sensor operable to provide a position-related signal for the piston; the sensor including:

a flexible connector having a first end attached to the piston;

a converting element attached to the cylinder and coupled to a second end of the flexible connector; the converting element having a rotating element operable to rotate in dependence on movement of the piston;

a translating member cooperating with the rotating element, wherein the translating member linearly displaces upon rotation of the rotating element; and

a transducer disposed to sense the translating member.

8. (original) The cylinder of claim 7 wherein the translating member displaces proportionally to displacement of the piston.

9. (original) The sensor of claim 1 further comprising a recoil mechanism coupled to said rotating element for imparting a rotational action on said rotating element.

10. (cancelled)

11. (cancelled)

12. (original) The sensor of claim 1 further comprising an anti-rotational force exerted on said translating member.

13. (original) The sensor of claim 1 further comprising an anti-backlash force exerted along a longitudinal axis of said translating member.